IN THE SPECIFICATION:

Please amend the paragraph beginning at page 14, line 5, as follows:

Fig. 7 illustrates a first exemplary construction of sub-demultiplexer ~~133-1~~ 135-1. As shown in Fig. 7, sub-demultiplexer ~~133-1~~ 135-1 receives channels λ_1-λ_8 at an input 525 of a 1 x 8 splitter 515, commercially available from IOT, for example. Splitter 515 has eight outputs, each of which supplying channels λ_1-λ_8 to a corresponding one of eight optical selectors 530. Splitter 515, as well as splitter 110, may include a waveguide doped with an optically active material, such as erbium. Such a waveguide may further be optically pumped so that splitter 515 has reduced loss or provides optical gain.

Please amend the paragraph beginning at page 15, line 1, as follows:

Fig. 8 illustrates an alternative construction for sub-demultiplexer ~~133-1~~ 135-1. Here, the channel group λ_1-λ_8 is supplied to a planar arrayed waveguide grating (AWG) 610 or dielectric thin film demultiplexer, which supplies a respective channel on each of outputs 610-1 to 610-8. If the spacing between adjacent ones of channels λ_1-λ_8 is relatively narrow, AWG 610 can introduce an unacceptably high level of undesired cross-talk. Accordingly, additional filtering may be required. Thus, a selector 630 is further illustrated in Fig. 8 to isolate a single channel, e.g., λ_1, and remove any cross-talk. In this case, selector 630 includes a coupler 655 receiving substantially channel λ_1 at a first port 655-1. The input light is next supplied to in-fiber Bragg grating 640 through second port 655-2. In-fiber Bragg grating 640 substantially reflects only channel λ_1, while passing other wavelengths. Thus, channel λ_1 is reflected back to second port 655-2 and output to one of photodiodes 150 via third output port 655-3 of coupler 655.

Please amend the paragraph beginning at page 16, line 1, as follows:

Fig. 9 illustrates a further exemplary construction of sub-demultiplexer ~~133-1~~ 135-1. In this instance, sub-demultiplexer ~~133-1~~ 135-1 comprises a plurality of Mach-Zehnder interferometers. It is known that Mach-Zehnder interferometers, which include optical waveguides of varying lengths, can be used to separate wavelengths (see for example, published European Patent Application EP0482461). Accordingly, as shown in Fig. 9, Mach-Zehnder interferometers can be cascaded to separate a group of wavelengths. For example, Mach-Zehnder interferometer 710 separates input channels λ_1-λ_8 into sub-groups of channels $\lambda_{1,\ 3,\ 5,\ 7}$ and $\lambda_{2,\ 4,\ 6,\ 8}$, respectively. Channel sub-group $\lambda_{1,\ 3,\ 5,\ 7}$ is supplied to Mach-Zehnder interferometer 715 and channel sub-group $\lambda_{2,\ 4,\ 6,\ 8}$ is supplied to Mach-Zehnder interferometer 720. As further shown in Fig. 9, Mach-Zehnder interferometers 715 and 720 further break down these channel sub-groups to channel pairs $\lambda_{1,5}$, $\lambda_{3,7}$, $\lambda_{2,6}$, and $\lambda_{4,8}$, which are further demultiplexed into individual channels by Mach-Zehnder interferometers 725, 730, 735 and 740, respectively.